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EXAMINER

GRAMLING, SEAN P

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NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com
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DETAILED ACTION

Amendment

Acknowledgment is made of Amendment filed June 17, 2008. Claims 1-4, 6-7 and 9-15 are amended. Claims 1-16 are pending.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1 and 3** are rejected under 35 U.S.C. 102 (b) as being anticipated by *Fujita et al* (US 6,517,213).

3. Regarding claim 1, Fujita discloses a light emitting device using an LED chip 12 comprising a mounting substrate 11 having a recess and having a wiring portion that supplies power to the LED chip; the LED chip being mounted on a bottom of the recess; a wavelength converting member 22 that is disposed so as to cover the recess and an edge area around the recess and that is excited by light emitted from the LED chip to emit light of a wavelength different from an excitation wavelength; and an emission control member 13 provided at a light output side of the wavelength converting member so as to allow emission of light coming from an area of the wavelength converting member that corresponds to the recess and to prevent emission of light coming from an

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area of the wavelength converting member that corresponds to the edge area around the recess (see Figures 1, 2 and 25, and column 9, line 17 through column 11, line 20).

4. Regarding claim 3, the emission control member 13 in Fujita comprises a light blocking frame member disposed on the light output side of the wavelength converting member at a location corresponding to the edge area around the recess and the frame member has an opening of substantially the same shape as the opening of the recess (see Figures 1, 2 and column 9, lines 28-32).

5. **Claims 1, 2, 5, 7-10 and 15-16** are rejected under 35 U.S.C. 102 (b) as being anticipated by *Lowery* (US 6,504,301).

6. Regarding claim 1, Lowery discloses a light emitting device using an LED chip 22 comprising a mounting substrate 30 having a recess and having a wiring portion that supplies electric power to the LED chip; the LED chip being mounted on a bottom of the recess; a wavelength converting member 52 that is disposed so as to cover the recess and an edge area around the recess and that is excited by light emitted from the LED chip to emit light of a wavelength different from an excitation wavelength; and an emission control member 54 provided at a light output side of the wavelength converting member so as to allow emission of light coming from an area of the wavelength converting member that corresponds to the recess and to prevent emission of light coming from an area of the wavelength converting member that corresponds to the edge area around the recess (see Figure 2 and column 4, line 30 through column 6, line 60).

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7. Regarding claim 2, the emission control member 54 in Lowery comprises an optical member that is disposed at the light output side of the wavelength converting member 52 and has a light input portion facing the light output side of the wavelength converting member 52 and the light input portion of the optical member having an end of substantially the same shape as the open end of the recess (see Figures 2 and 3 and column 6, lines 54-60).
8. Regarding claim 5, the light output side of the wavelength converting member 52 in Lowery is convex (see Figure 5).
9. Regarding claim 7, the emission control member 54 in Lowery comprises a lens disposed over the mounting substrate 36 to have an optical axis coinciding with an optical axis of the LED chip, and a wiring board 30 having a wiring portion 48 that is fixed to the mounting substrate so as to supply electric power to the LED chip 22; and a lens holder (32, 34) for positioning and fixing the lens on the wiring board, wherein a portion of the lens holder is located inside as compared with the outer diameter of the lens 54 (see Figures 2 and 3, and column 4, lines 30-35).
10. Regarding claim 8, the lens holder (32, 34) in Lowery is tapered toward the mounting substrate (see Figure 2).
11. Regarding claim 9, the lens 54 in Lowery comprises a hybrid lens (see Figure 2).
12. Regarding claim 10, one of a top face and a side face of the mounting substrate 30 in Lowery is fitted to the lens holder (32, 34) (see Figure 2).
13. Regarding claim 15, the light emitting device in Lowery further comprises a light extraction increasing portion 50 provided on the light output side of the LED chip 22 to

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increase the efficiency of extraction of light from the LED chip by being combined with the LED chip and a sealing resin 50 that fills the recess in the mounting substrate where the LED chip is mounted so as to seal the recess, wherein a top of the light extraction increasing portion located higher than a top of a wall of the recess (see Figure 2 and column 5, lines 27-65).

14. Regarding claim 16, the mounting substrate in Lowery has a second recess 38 around the recess so that the resin can flow into the second recess (see Figure 2).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. **Claims 4 and 5** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Fujita et al* (US 6,517,213).

17. Regarding claim 4, an outer edge area of the wavelength converting member 22 in Fujita is compressed by the frame member pressed against the wavelength converting member (see Figures 1 and 2). Fujita does not specifically disclose that the wavelength converting member 22 be made of a material of high elasticity. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select a wavelength converting member 22 comprised of a material of high

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elasticity since it has been held that the selection of known material based on its suitability for the intended use for prior art parts does not make the claimed invention patentable over that prior art (*In re Lesin*, 125 USPQ 416).

18. Regarding claim 5, the light output side of the wavelength converting member 22 in Fujita is not of a convex shape. However, it would have obvious to one of ordinary skill in the art at the time the invention was made to form the light output side of the wavelength converting member 22 into a convex shape since it has been held that lacking any criticality, changing the form or shape of prior art parts does not make the claimed invention patentable over that prior art (*In re Dailey*, 149 USPQ 47).

19. **Claims 6 and 11-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Lowery* (US 6,504,301).

20. Regarding claim 6, Lowery does not specify that the density of the wavelength converting material in the wavelength converting member 52 increase toward the center. However, it has been held that lacking any criticality, changing the form or shape of prior art parts does not make the claimed invention patentable over that prior art (*In re Dailey*, 149 USPQ 47).

21. Regarding claims 11-14, Lowery discloses a protrusion (32) formed on the under surface of the lens holder, a lead electrode 44 provided on the mounting substrate to be connected to the wiring portion 48 of the wiring board 30 and a wiring land 46 that has substantially the same shape as the lead electrode 44 and that is formed on the wiring portion of the wiring board (see Figures 2 and 3), but does not specify that the lens holder (32,34) and the mounting substrate be engaged in either grooves or through

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holes formed on the wiring board 30. Lowery also does not disclose a metal foil around the fixed portion (32) of the lens holder for soldering. It would have been obvious to one of ordinary skill in the art at the time the invention was made solder the fixed portion 32 to the wiring board 30 and form a groove in the wiring board 30 in order to properly position the lens holder (32, 34) and mounting substrate on the wiring board 30.

Response to Arguments

22. Applicant's arguments filed June 17, 2008 have been fully considered but they are not persuasive. Examiner respectfully disagrees with Applicant's contention that the emission control member 13 in Fujita does not prevent an emission of light coming from an area of the wavelength converting member 22 that corresponds to the edge area around the recess. Fujita specifically teaches that the wavelength converting member 22 is covered by the emission control member 13 (see Figure 1 and column 9, lines 29-35), and that the emission control member 13 is placed on a periphery of the upper surface (the edge area) of the mounting substrate 11 (see Figures 1 and 2 and column 9, lines 28-29). Accordingly, the emission control member 13 will allow light to be outputted through the recess area (called window W in Fujita) and will prevent light from being emitted from the area of the converting member 22 that corresponds to the edge area (the upper surface) of the mounting substrate that the converting member 22 rests on. The rejection of claims 1 and 3 under 35 U.S.C. 102 (b) as being anticipated by Fujita is therefore maintained.

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23. Examiner also respectfully disagrees with Applicant's contention that the emission control member 54 does not prevent an emission of light coming from an area of the wavelength converting member 22 that corresponds to the edge area around the recess. Lowery specifically teaches that the emission control member 54 is attached to the wavelength converting member 52 (see column 6, lines 54-57 and Figure 2).

Accordingly, the emission control member 54 rests on the wavelength converting member 52 and inherently prevents emission of light from the area of the wavelength converting member 52 that it rests on which corresponds to the edge area of the mounting substrate 30 that supports the wavelength converting member 52 (see Figure 2). The rejection of claims 1, 2, 5, 7-10 and 15-16 under 35 U.S.C. 102 (b) as being anticipated by Lowery is therefore maintained.

Conclusion

24. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SEAN P. GRAMLING whose telephone number is (571)272-9082. The examiner can normally be reached on MONDAY-FRIDAY 7:30 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sean P Gramling
Examiner
Art Unit 2875

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Primary Examiner, Art Unit 2875